SECURITY CLASSIFICATION OF THIS PAGE					(4
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1a. REPOI AD-A236 4	<b>113</b> —	1b. RESTRICTIVE	MARKINGS	yan.	TIC
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4. PERFORMING ORGANIZATION REPORT NUMBER DOD POP TR/AYD 91-012	ER(S)	5. MONITORING	ORGANIZATION RE	PORT NUM	ABER(S)
6a. NAME OF PERFORMING ORGANIZATION	6b. OFFICE SYMBOL (If applicable)	7a. NAME OF MO	ONITORING ORGAN	NIZATION	
Packaging Division	SMCAR-AEP				
6c. ADDRESS (City, State, and ZIP Code) U.S. Army Armament Research Development Engineering ( Picatinny Arsenal, NJ 078		7b. ADDRESS (Cit	y, State, and ZIP C	iode)	
8a. NAME OF FUNDING / SPONSORING ORGANIZATION	8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT	I INSTRUMENT IDE	NTIFICATIO	ON NUMBER
8c. ADDRESS (City, State, and ZIP Code)			UNDING NUMBER		
,		PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.
11. TITLE (Include Security Classification) Performance Oriented Packa Packed (50) Rounds per Woo  12. PERSONAL AUTHOR(S)		of Cartrid	ge, Linked	d 25mm	Ammunition
Michael W. Selk	OVERED	44 DATE OF PERO	DT /Varantasak /	and les	DACE COUNT
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16. SUPPLEMENTARY NOTATION					
17. COSATI CODES	18. SUBJECT TERMS (		_		
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FIELD GROUP SUB-GROUP  19. ABSTRACT (Continue on reverse if necessary  This report contains the t	Performance Container  and identify by block notes ting and telesting per	e Oriented  wmber) est results	Packaging, performed	POP,	25mm Wood

I REPORT NUMBER DOD POP HM TR/AYD 91-012

II TITLE: PERFORMANCE ORIENTED PACKAGING TESTING OF CARTRIDGE,
25MM LINKED AMMUNITION PACKED 50 ROUNDS
PER WOOD BOX

AUTHOR:

MICHAEL W. SELK

PERFORMING ACTIVITY: ARDEC

ADDRESS:

DEPARTMENT OF THE ARMY

ARDEC

HQ, U.S. ARMY ARMAMENT, MUNITIONS, AND

CHEMICAL COMMAND

PICATINNY ARSENAL, NJ 07806-5000

ATTN: SMCAR-AEP

DATE: 91-05-17

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Addression For Mil' GRAMI DTIC TAB



### 1. DATA:

#### CONTAINER:

TYPE: BOX, WOOD

UN CODE: 4C1

SPECIFICATION NUMBER: MIL-B-2427

MATERIAL: WOOD

CAPACITY: 42.2 LITERS

DIMENSIONS: 72.4cm x 24.8cm x 23.5cm (28 1/2" x 9 3/4" x 9 1/4")

GROSS WEIGHT: 40 KG (88 LBS)

# PRODUCT:

NAME: 25MM LINKED APDS-T M791 AMMUNITION

DRAWING NUMBER: 12013533

UNITED NATIONS NUMBER: 0339

UNITED NATIONS PACKING GROUP: II

UNITED NATIONS NOMENCLATURE: CARTRIDGES FOR WEAPONS, INERT

PROJECTILE

PHYSICAL STATE: SOLID

AMOUNT PER CONTAINER: 50 ROUNDS W/ LINKS

NSN: 1305-01-095-6014

NAME: 25MM LINKED HEI-T M792 AMMUNITION

DRAWING NUMBER: 12013230

UNITED NATIONS NUMBER: 0321

UNITED NATIONS PACKING GROUP: II

UNITED NATIONS NOMENCLATURE: CARTRIDGES FOR WEAPONS

PHYSICAL STATE: SOLID

AMOUNT PER CONTAINER: 50 ROUNDS W/ LINKS

NSN: 1305-01-094-7016

NAME: 25MM LINKED TP-T M793 AMMUNITION

DRAWING NUMBER: 12013224

UNITED NATIONS NUMBER: 0339

UNITED NATIONS PACKING GROUP: II

UNITED NATIONS NOMENCLATURE: CARTRIDGES FOR WEAPONS, INERT

PROJECTILE

PHYSICAL STATE: SOLID

AMOUNT PER CONTAINER: 50 ROUNDS W/ LINKS

NSN: 1305-01-095-0248

NAME: 25MM LINKED HEI-T MK210 MODO AMMUNITION

DRAWING NUMBER: 12013230

UNITED NATIONS NUMBER: 0321

UNITED NATIONS PACKING GROUP: II

UNITED NATIONS NOMENCLATURE: CARTRIDGES FOR WEAPONS

PHYSICAL STATE: SOLID

AMOUNT PER CONTAINER: 50 ROUNDS W/ LINKS

NSN: 1305-01-198-2191

NAME: 25MM LINKED TPDS-T M910 AMMUNITION

DRAWING NUMBER: 12556500

UNITED NATIONS NUMBER: 0328

UNITED NATIONS PACKING GROUP: II

UNITED NATIONS NOMENCLATURE: CARTRIDGES FOR WEAPONS, INERT

PROJECTILE

PHYSICAL STATE: SOLID

AMOUNT PER CONTAINER: 50 ROUNDS W/ LINKS

NSN: 1305-01-298-6414

## 2. BACKGROUND:

THIS REPORT CONTAINS THE TESTING AND TEST RESULTS PERFORMED ON LINKED 25MM AMMUNITION PACKED IN A WOOD BOX, MANUFACTURED IN ACCORDANCE WITH MIL-B-2427. FIFTY (50) CARTRIDGES WERE PACKED IN A FIBERBOARD BOX (12013704) AND THIS FIBERBOARD BOX WAS PACKED IN ONE WOOD BOX(12013704) ACCORDING TO DRAWING 12013671. THIS PACK IS SUBMITTED FOR PERFORMANCE ORIENTED PACKAGING CERTIFICATION.

### 3. TEST:

EACH OF THE THREE CONTAINERS TESTED WERE DROPPED SIX TIMES AT A HEIGHT .91 METERS (3 FEET) IN THE FOLLOWING ORIENTATIONS: TOP, BOTTOM, LONG SIDE (FRONT FACE), LEFT END, BOTTOM RIGHT EDGE, AND TOP LEFT REAR CORNER. IN ADDITION EACH OF THE THREE CONTAINERS WAS DROPPED ONCE AT A HEIGHT OF 2.1 METERS (7 FEET) ON ITS BASE IN LIEU OF UN REQUIREMENTS OF 1.2 METERS (4 FEET). THE CONTAINERS WERE DROPPED ON A REINFORCED CONCRETE SURFACE. THIS TEST IS MORE SEVERE THAN THE UN REQUIREMENTS AS THE CONTAINER EXPERIENCES MULTIPLE IMPACTS IN A VARIETY OF ORIENTATIONS AND IS ALSO DROPPED ONCE AT A HEIGHT OF 7 FEET EXCEEDING THE UN REQUIREMENT.

## 4. RESULTS:

THE CONTAINERS PASSED ALL TESTS SINCE NONE OF THE CONTENTS WERE DISCHARGED. THEY ARE CONSIDERED SAFE FOR INTERNATIONAL TRANSPORTATION IN ACCORDANCE WITH PERFORMANCE ORIENTED PACKAGING REGULATIONS.

### 5. REFERENCED MATERIAL:

- A. FEDERAL REGISTER, "49 CFR PART 107, 1991"
- 6. BASED ON THE ABOVE EQUIVALENT POP TESTING, THE FOLLOWING POP SYMBOL HAS BEEN APPLIED TO CONTAINERS MANUFACTURED IAW DRAWING 12013671 & MIL-B-2427.

4C1/Y40/S/[3- LAST TWO DIGITS OF YEAR PACKED USA/DOD/AYD